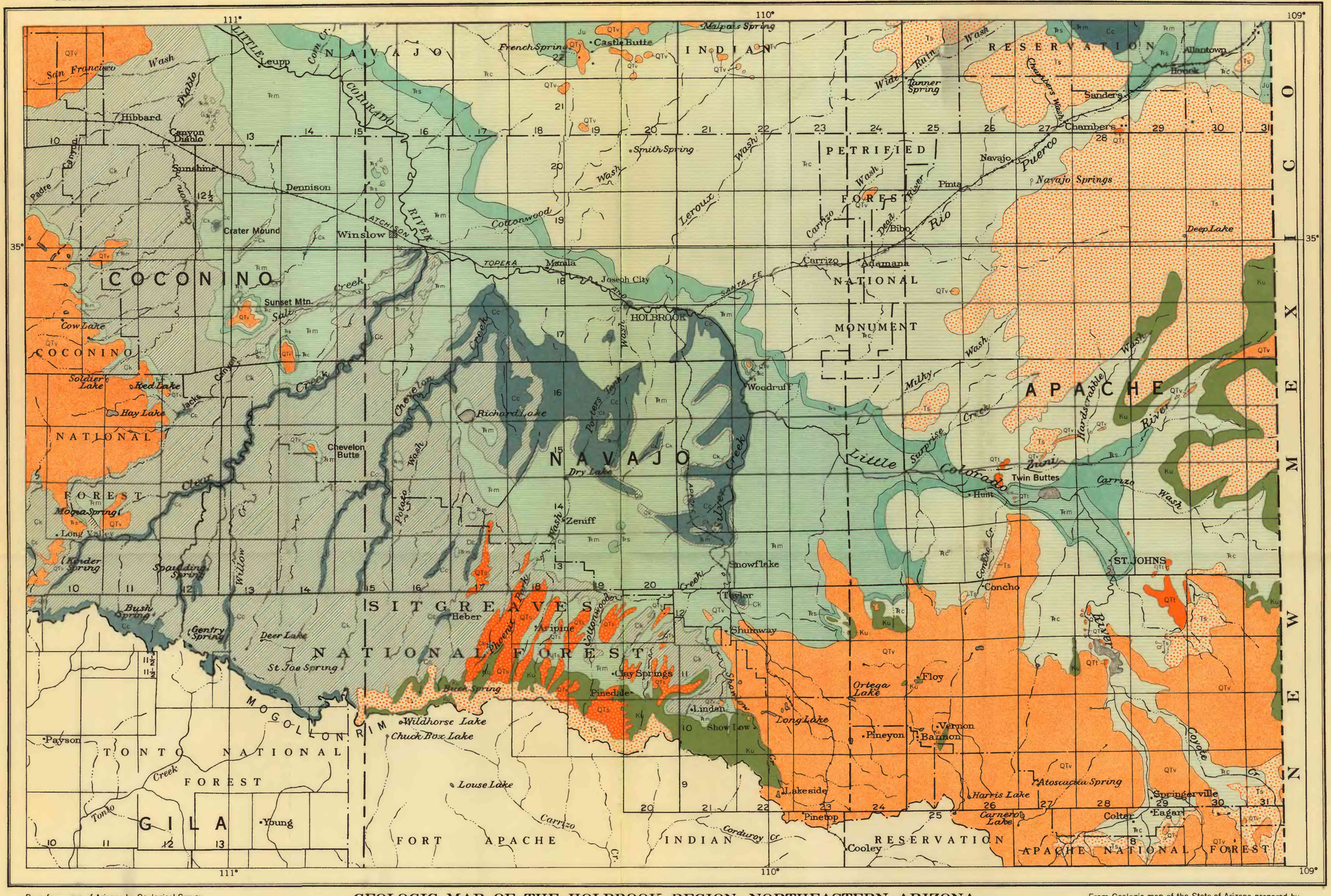
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Base from map of Arizona by Geological Survey, edition of 1924, with modifications

GEOLOGIC MAP OF THE HOLBROOK REGION, NORTHEASTERN ARIZONA

Scale 1/500000

10 0 10 20 30 40 Miles

1938

From Geologic map of the State of Arizona prepared by N. H. Darton, Carl Lausen, and E. D. Wilson; published by Arizona Bureau of Mines in cooperation with the Geological Survey, with modifications and additions by M. A. Harrell and E. B. Eckel

EXPLANATION

QTv — Lava flows and cinder cones
(Numerous small areas of intrusive igneous rocks in north-central portion of area not shown. Lava yields large quantities of good water, particularly at lower contact. Cinder cones unfavorable for accumulation of water)

QTs — High-level gravel
(Unconsolidated gravel and sand yield water in small areas)

QTt — Travertine deposits
(Warm springs associated with these deposits yield large quantities of highly mineralized water)

Ts — Sand and gravel
(Unconsolidated sand with some gravel, volcanic ash, etc. Base of sands is a good water horizon)

Upper Cretaceous

Ku — Upper Cretaceous rocks, undivided
(Sandstone, coal, and shale. Many springs and a few wells produce fresh water from sandstones)

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Ju — Morrison formation and Wingate sandstone
(Sandstone and shale. Unimportant as a source of water supply because of scanty distribution within Holbrook area)

Upper Triassic

Trc — Chinle formation
(Variegated shales and sandstones; yields but little water, which is commonly of poor quality)

Upper(?) Triassic

Trs — Shinarump conglomerate
(Coarse sandstone and conglomerate. Small seepage springs yield good water)

Lower Triassic

Trm — Moenkopi formation
(Sandy shales, sandstones, and earthy limestones; yields but little water, which is commonly of poor quality)

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Permian

Ck — Kaibab limestone
(Limestone with some sandy and shaly beds, not generally water-bearing)

Cc — Coconino sandstone
(Massive light-colored sandstone. Best water-bearing formation in Holbrook area)